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18. SUSTAINABILITY

18.1 INTRODUCTION

The MVRMA requires developers to incorporate guiding principles of sustainability into proposed developments in the NWT. Dezé Energy Corporation, through its unique ownership structure, developed the Taltson Hydroelectric Expansion Project on sustainable principles from its inception.

Dezé intuitively recognizes the interdependence between conservation and Project development. Conservation, as defined by the Government of the Northwest Territories, is "the wise use of renewable, non-renewable and heritage resources so that long-term benefits can be enjoyed by present and future generations" (NWT Govt Policy 2008). For the Project to be developed in a sustainable manner, Dezé recognizes that decisions and actions related to natural and heritage resources in the Project area must embrace these conservation principles.

The unique ownership arrangement of Dezé combines Aboriginal and government interests. Dezé consists of the Akaitcho Energy Corporation (AEC), the Métis Energy Company Ltd (MEC), and the NWT Energy Corporation (03) Ltd. (NTEC 03), each with a share of ownership in the company. These three groups have a vested business interest in the Project but also have a governance relationship concerning the well-being of their respective communities. The owner groups, therefore, direct sustainability through Project planning and operational applications that address conservation issues. Furthermore, due to the unique relationships that the owner groups have with communities and with local governing bodies, the owner groups also have the opportunity to address social, economic, cultural and environmental issues within their respective communities by directing profits into building blocks of community sustainability.

As a result of the owner groups' responsibilities to their communities and residents within the Project area, Dezé is not only evaluating the sustainability of the project for the DAR, but intends to continually monitor the Project sustainability over the life of the Project, and continually engage and communicate with the communities and residents within the Project area.

18.2 DEFINITION OF SUSTAINABLE DEVELOPMENT

Sustainable development, as described by the MVEIRB (s115 Guiding Principles) and Government of the Northwest Territories (Policy No. 53.02) and adopted and applied to the Project, involves *the development of natural resources in a manner that ensures economic, social, and cultural needs and well-being of residents and communities in the Project's area of influence are met while maintaining ecosystem integrity and diversity without compromising the ability of future generations to meet their needs* (GNWT 2008; MVRM Act 1998).

The scope and capacity of the Project to contribute to and promote the needs of these communities is addressed through an approach that includes both direct and indirect linkages. The Expansion Project would have the ability to directly affect sustainability in areas such as jobs, cultural site conservation, or harvesting and trapping within the Project area, as well as beyond the Project area through linkages

to reduced GHG production and reduced consumption of a non-renewable resource, on regional to global scales over multiple generations. The developer, through its individual ownership groups, would have the ability to affect indirect linkages such as health, housing, or other parameters of community well-being and sustainability.

18.2.1 Principles

Dezé has reviewed current sustainability frameworks and philosophies to help frame its inherent approach to sustainability. The primary sources included MVRMA's s115 Guiding Principles, the International Institute of Sustainable Development (IISD – the Bellagio Principles), Tahltan Seven Questions to Sustainability Report, the Canadian Sustainability Indicators Network, and the Sustainability Livelihoods Framework.

The Bellagio Principles were developed in 1996 by an international group of practitioners and researchers for the purpose of assessing sustainable development. These principles remain the international guidelines and foundation for all sustainability initiatives. The Bellagio Principles

> *"... serve as guidelines for the whole of the assessment process including the choice and design of indicators, their interpretation and communication of the result. They are interrelated and should be applied as a complete set. They are intended for use in starting and improving assessment activities of community groups, non-government organizations, corporations, national governments, and international institutions." (IISD, 1997. Assessing Sustainable Development, Principles in Practice. IISD, Canada).*

The MVRMA's s115 Guiding Principles specifically address: social, economic, cultural and environmental effects; planning and design contributions; monitoring, management and reporting; and stakeholder input. These principles and the Bellagio Principles overlap, with one variation. The Bellagio Principles identify three essential elements: social, economic and environmental. MVRMA, the Government of the Northwest Territories, and the International Institute of Sustainable Development all now recognize *culture* as a separate and distinct element. The sustainability principles embraced by Dezé for the Expansion Project include all four essential elements: social, economic, environmental and cultural.

These sustainability principles are outlined in Table 18.1 and were used to describe and evaluate the sustainability of the Expansion Project.

Essentially, these principles identify and outline:

- a starting point or Vision (vision and holistic perspective),
- the subject matter to be measured or Content (essential elements, scope and focus),
- how the content would be measured or the **Process** (openness, communication and participation), and
- the action status and commitment, labelled as **Assessment** (ongoing assessment and capacity) of the sustainability process.

Table 18.1 — Sustainability Principles

BELLAGIO			MVRMA	
Principles		**Description**	**Guiding Principles**	**Description**
VISION	Guiding vision and objectives	Clear vision of sustainable development and objectives that define that vision are required to provide direction and benchmarks for assessment.	Planning and design contributions	Planning and design assimilate sustainable development principles
	Holistic perspective	Considers the whole system as well as its parts, the existing state and rate of change of that state, and consideration of both positive and negative consequences of human and environmental systems in monetary and on-monetary terms.		
CONTENT	Essential elements	Key elements: social, economic, and environmental. *Social* elements consider equity and disparity within current populations and future generations. *Economic* elements consider development of jobs, businesses and non-profit organizations. *Environmental* elements consider conditions on which biological life depends.	Social, economic, cultural and environmental effects	The Project makes a positive overall contribution towards social, economic, cultural and environmental elements *Cultural* elements consider governance and cultural identity.
	Adequate scope	The study area is large enough to include local but also long-distance effects on people and ecosystems. The time horizon spans both human and ecosystem time scales.		
	Practical focus	The extent that the Project can contribute to the sustainability of essential elements that matches the vision and objectives set forth. Parameters are measurable and limited to key areas.		

BELLAGIO			MVRMA	
Principles		Description	Guiding Principles	Description
PROCESS	Effective communication	Deployment designed to address the needs of stakeholders using clear, plain language to communicate in a medium that is easily accessible.	Stakeholder input	Engagement and participation of stakeholders is maintained throughout the project lifecycle
	Openness	Methods employed to assess sustainability and results accessible and communicated to all stakeholders.		
	Broad participation	Inclusion of a broad representation of key stakeholders to ensure recognition of diverse values and changing issues.		
ASSESSMENT	Ongoing assessment	Establishment of baseline data to determine starting point. Repeated, regular measurement of established parameters as instructed by regulatory bodies to assess progress matched with sustainability vision and objectives. Adjust as new insights are gained.	Monitoring, management and reporting	Monitoring, management and reporting systems incorporated essential elements of sustainability
	Institutional capacity	Clear assignment of responsibility for providing ongoing support for data collection, maintenance and documentation.		

18.3 SUSTAINABILITY METHODOLOGY

18.3.1 Vision and Perspective

A sustainable project must have a guiding vision with primary objectives and a holistic perspective of sustainability. Table 18.2 reviews the sustainability principles for vision, the first group of principles in Table 18.1 above. This overall vision guides all project and proponent decisions throughout the lifecycle of the project, including the design, construction, operations, and future direction of the project.

Table 18.2 — Sustainability Principles: Vision

BELLAGIO			MVRMA	
Principles		**Description**	**Guiding Principles**	**Description**
VISION	Guiding vision and objectives	Clear vision of sustainable development and objectives that define that vision are required to provide direction and benchmarks for assessment.	Planning and design contributions	Planning and design assimilate sustainable development principles
	Holistic perspective	Considers the whole system as well as its parts, the existing state and rate of change of that state, and consideration of both positive and negative consequences of human and environmental systems in monetary and non-monetary terms.		

The Dezé vision began with a preliminary concept - Project ownership, thus Project control, by the residents that lived within the influence of the Project. Meetings with the leadership of the Akaitcho First Nations (Salt River First Nation, Smith's Landing First Nation and Deninu Kué First Nation), the Northwest Territory Métis Nation (locals in Fort Smith, Fort Resolution and Hay River), and the Government of the Northwest Territories led to the signing of the MOU that established a framework for the three organizations to work together to maximize the efficiency of the existing power facility and increase power production in a manner that adheres to the principles of sustainability. This was a significant step towards a consensus approach with respect to Project participation, development, and benefits. In 2006, these partners formalized the first part of the MOU with the formation of a Memorandum of Intent (MOI) followed by the formation of a new corporate entity, the Dezé Energy Corporation.

The vision and perspective of Dezé is to enable the owner groups to work together with a common mandate to pursue mutually beneficial interests, including environmental and cultural protection as well as economic and social benefits, through the various stages of the Expansion Project from design through to operations and beyond.

The unique ownership arrangement of the Dezé Energy Corporation Ltd. combines Aboriginal groups and government interests, and provides the people of the Akaitcho Territory Government, the Northwest Territory Métis Nation and the NWT Energy Corporation (03) Ltd. with an opportunity to address the sustainability linkages of their respective communities. The overarching interests of the ownership group contribute to a vision for the Project that embraces sustainable development by delivering on social, cultural, economic, and environmental elements through Project decisions and direction that adhere to sustainable development principles. Key sections of this DAR that demonstrate the extent of Dezé's vision and commitment to integrate sustainable development principles into the Project include:

- Chapter 3 – Developer.
- Chapter 5 – Purpose and Rationale.
- Chapter 6 – Development Description, including design mitigation features.
- Chapter 7 – Environmental Management System.
- Chapter 8 – Alternatives.
- Chapter 15.8 – Employment and Training.
- Chapter 20 – Table of Commitments.

18.3.2 Content

Table 18.3 reviews the sustainability principles for content.

Table 18.3 — Sustainability Principles: Content

BELLAGIO			MVRMA	
Principles		**Description**	**Guiding Principles**	**Description**
CONTENT	Essential elements	Key elements: social, economic, and environment. *Social* elements consider equity and disparity within current populations and future generations. *Economic* elements consider development of jobs, businesses and non-profit organizations. *Environmental* elements consider conditions on which biological life depends.	Social, economic, cultural and environmental effects	The Project makes a positive overall contribution towards social, economic, cultural and environmental elements *Cultural* elements consider governance and cultural identity.
	Adequate scope	The study area is large enough to include local but also long distance effects on people and ecosystems. The time horizon spans both human and ecosystem times scales.		

BELLAGIO			MVRMA	
Principles		Description	Guiding Principles	Description
	Practical focus	The extent that the Project can contribute to the sustainability of essential elements that matches the vision and objectives set forth. Parameters are measurable and limited to key areas.		

18.3.2.1 ESSENTIAL ELEMENTS

Four elements describe the essential components of sustainability: social, economic, environmental and cultural. Traditional sustainability definitions include the three elements: social, economic and environmental. An additional element, cultural, is included to profile an important distinction not entirely addressed under the social element. This separation is supported by MVRMA, the GNWT Policy on Sustainable Development and the International Institute of Sustainable Development, as they all recognize culture as a separate and distinct element key component of sustainability.

To evaluate the Project sustainability, indicators for each of the essential elements are required. However, as the Project matures and progresses through different stages of its life cycle, indicators of its sustainability would change or mature along with the Project.

Indicators for the essential elements are either direct or indirect. Direct indicators are those on which the Project may have a direct influence. Indirect are those that the Proponent may influence through the owner groups. Examples of direct and indirect indicators taken from sustainable development literature are attached at the end of this chapter. Potential essential element indicators would be examined to determine those with direct and indirect linkages, which either Dezé or the individual owner groups have the capacity and ability to contribute to and/or promote. This selection would be based on the Project's scope and focus within its area of influence and the indicators selected.

At this stage of the Project, direct indicators were identified via stakeholder input through community engagement, as well as through the community and technical scoping sessions. These are primarily outlined in the DAR Terms of Reference (See DAR Chapter 1 – Introduction). As sustainability is inherent to the Project through the control, and under the direction, of Dezé, the principles of sustainability are woven into the Project life cycle, including concept, design, operations, future direction, and effects mitigation. Therefore, this DAR contains discussion and predictions of direct indicators of sustainability (Chapters 13 through 15). Of specific social and economic interest is the Project procurement policy described in Chapter 15.8 – Employment and Training. The Project procurement policy is a commitment made by Dezé, and thus the owners groups, to their own people, for local capacity building and employment.

As the Project completes the EA and permitting processes, and valued ecosystem, social, and cultural components (VEC) and monitoring scopes are finalized for the Project, those VECs would be used, in part, as the direct indicators of sustainability.

Indirect indicators of Project sustainability, and in particular those associated with community and residents' economic, social, and cultural well-being, are influenced by the owner groups' participation in meeting the needs of their communities' well-being. Needs are dependent on input from, and thus determined by, individual communities. Core needs of well-being identified by the IISD (July, 2008) include employment and education levels, security, housing, health and community services. Other critical and community specific needs also exist, for example governance and cultural identity. Needs typically vary across and within communities, and require individualized community plans to strengthen well-being.

The Dezé owner groups would not only experience direct economic benefits from the Project, but as owners of the capital assets – the Expansion Project infrastructure – could use the assets to leverage the development of community infrastructure and initiatives that are cornerstones for building and maintaining sustainable communities. This indirect effect has considerable potential to benefit community health and well-being, enable traditional life style choices, and strengthen community cohesion.

Economic life choices refer to being economically independent to choose the extent to which one pursues traditional and non-traditional economic pursuits. Diversity of economic and employment opportunities and participation in traditional economic pursuits are indicators of a positive parameter for life choices.

The owner groups' participation in community and cultural well-being would vary between groups and over time, depending on the specific community needs and the instruments available to the groups to assist communities and residents in meeting their well-being needs. Owner groups' visions and plans for strengthening their communities' well-being could entail a variety of instruments, such as participation in the community sustainability plan[i] or other types of higher-level initiatives. The plans and instrument(s) are the responsibility of the owner groups, who are accountable to their governments, communities, and residents.

The indicators of well-being used in the owner groups' visions and plans would become the Expansion Project's indirect indicators, primarily for the social and economic essential elements of sustainable development.

Select elements contributing to a sustainable development of the Expansion Project that have been incorporated into the planning and design as a result of the vision of Dezé Energy Corporation, and as referenced throughout the DAR, are summarized in Table 18.4.

Table 18.4 — Sustainability Elements Incorporated into the Project Design

Essential Element	Sustainability Commitments
SOCIAL	Construction is estimated to generate direct jobs over different periods of the Project's construction phase.
	Indirect employment is estimated to generate jobs and labour income of millions dollars in support of construction; includes freight and fuel trucking to Twin Gorges, building transmission line storage yards and camps over the three winter road periods, camp operations, flight transportation and engineering support.
	Dezé has factored energy and economic issues into its iterative Project design process involving all professional disciplines and Traditional Knowledge. Refer to Socio-Ec Section – Project Design Considerations of Public Importance.
ECONOMIC	Unique ownership structure provides an opportunity for collaboration and cooperation among the aboriginals of the South Slave region of the Northwest Territories.
	Extending the life of the existing Twin Gorges Power Station. Majority of infrastructure already in place, capital costs low as compared to benefit of resource.
	Extending mine lives beyond current plans by reducing operating costs.
	Increasing winter road longevity, and negating or delaying the need for alternate transportation options, such as an all-season road with higher environmental and economic cost.
	Developing an energy corridor and allowing economic development of new industries along the corridor, or alternatively providing power to Yellowknife or southern customers.
	Dezé is looking forward, beyond the life of the mines, to potential hydropower customers so that the Project may contribute to economic development of other industries in proximity to the line route and in the Slave Geological Province.
	Owning the capital asset – the Expansion Project infrastructure; this asset can be used to leverage funds for the development of community infrastructure and initiatives.
CULTURAL	Identification of known sensitivities in the area of the Project based on the experience of the Dezé Board of Directors, Traditional Knowledge, scientific research and consultations with potentially-affected people and communities.
	Providing opportunity for collaboration and cooperation among the Aboriginal groups of the region through the unique ownership structure comprising the Akaitcho First Nation, Métis Nation, and NTEC.
	Protecting culturally sensitive areas by designing infrastructure to avoid identified or known sites.
ENVIRONMENTAL	Displacing approximately 104 million litres of diesel use per year. Significant reduction in greenhouse gas emission, equating to a 16% reduction of the 2001 NWT levels.
	Minimizing changes to the existing reservoir infrastructure. Optimizing the hydroelectric generating facility within an existing project footprint, thus avoiding potential effects of developing a new project in a pristine watershed.

Essential Element	Sustainability Commitments
	Limited and select timber clearing along the transmission line.
	Environmental design features that are relevant to traditional and/or cultural values.
	Reducing fuel hauls to mines on existing winter roads, thus reducing potential for spills
	Reducing, or minimizing the increase of, traffic volumes on existing winter roads, reducing the risk of vehicle effects on wildlife.

18.3.2.2 SCOPE AND FOCUS

The applicability of the Project's contribution to "protect and conserve social, cultural, and economic well-being of residents, communities and the way of life for Aboriginal peoples" (MVRMA's Guiding Principles s115) has local, regional, and beyond-regional scope in regard to spatial boundaries and multi-generational temporal boundaries. The type, amount, and duration of Project influences are contingent on the phase of the Project under consideration and the economic viability and longevity of the Project as a business entity.

The Project study area is defined in various sections of this DAR, as appropriate for the element of study. For the most part, the Project includes the communities of the South Slave region of the Northwest Territories, including Łutsel K'e, Fort Resolution, Hay River and Fort Smith, the Akaitcho First Nations (Salt River First Nation, Smith's Landing First Nation and Deninu Kué First Nation) and the Northwest Territory Métis Nation (locals in Fort Smith, Fort Resolution and Hay River).

The Project area also includes the natural resources – land, water, and biological components – potentially influenced by the Project or used by the community residents or others.

The temporal focus of the Project spans from the initiation of the Project through the operations phase, which covers a 40-year window, followed by evaluation of the Project's future direction. The temporal boundaries also consider the effect of the Project has on the needs of future generations.

The principle purpose of the Project – to maximize the efficiency of the existing power facility and increase power production in a manner that adheres to the principles of sustainability – is an example of the Project's use of water, a natural resource, in a manner that maintains quantity and quality, ensuring equal and adequate supply of this resource is available for future local and regional generations.

Although the Project scope is primarily local and/or regional as described above, the scope extents to beyond-regional and into global aspects. The displacement of diesel power by the hydropower created by the Expansion Project would reduce particulate matter associated with burning of diesel, reduce greenhouse gases, and reduce consumption, and thus extraction, of fossil fuel.

Reduction of particulate matter and greenhouse gases would extend from regional – the vicinity of the transportation and burning of diesel, to global – the wind transport

of that particulate matter to areas beyond geopolitical boundaries. Reduced consumption of fossil fuel would be realized throughout the entire life cycle of that fuel including its extraction, processing, and transportation.

These regional to global influences of the Project not only span the time frames of the current local generation, but also contribute to the security and availability of natural resources, including air, earth, and water, for future international generations.

Although the Project has global influences, the essential element indicators of sustainability match the vision and objectives of the Project. Furthermore, the Project is going beyond assessing only the direct indicators, but also including, through the owner groups, indirect indicators that the Project could not measure without the assistance of the owner groups.

Key sections of this DAR that are relevant to the content, including the essential element indicators, scope and focus, include:

- Chapter 10 – Assessment Methods and Mitigation.
- Chapter 12 – Barren-Ground Caribou.
- Chapter 13 – Water Fluctuations in the Taltson River Watershed.
- Chapter 14 – Ecological Changes in Trudel Creek.
- Chapter 15 – Biophysical and Socio-Economic Subjects of Note.
- Chapter 16 – Project Responses to the Environment.
- Chapter 17 – Accidents and Malfunctions.
- Chapter 19 – Cumulative Effects Analysis.

18.3.3 Process

Table 18.5 reviews the sustainability principles for process. Process involves the measurement and communication of sustainability of the Taltson Project to the stakeholders, including the communities and residents within the area of Project influence.

Table 18.5 — Sustainability Principles: Process

BELLAGIO			MVRMA	
Principles		**Description**	**Guiding Principles**	**Description**
PROCESS	Effective communication	Deployment designed to address the needs of stakeholders using clear, plain language to communicate in a medium that is easily accessible.	Stakeholder input	Engagement and participation of stakeholders is maintained throughout the project lifecycle
	Openness	Methods employed to assess sustainability and results accessible and communicated to all stakeholders.		

BELLAGIO			MVRMA	
Principles		Description	Guiding Principles	Description
	Broad participation	Inclusion of a broad representation of key stakeholders to ensure recognition of diverse values and changing issues.		

18.3.3.1 STAKEHOLDER INPUT

Communication is central to all aspects of the sustainability process. Engagement, openness and broad participation are crucial during the design and implementation of the Project. Engagement and participation ensures the very audience that has the most interest in the Project as a sustainable development has opportunity for input to the diverse and changing issues.

Local government and community consultation for the Project commenced in 2002 and 2003 through formal meetings with the leadership of the Akaitcho First Nations (Salt River First Nation, Smith's Landing First Nation and Deninu Kué First Nation) and the Northwest Territories Métis Nation (locals in Fort Smith, Fort Resolution and Hay River). These meetings were followed in 2004 with public information sessions in the communities of Fort Smith, Fort Resolution and Hay River.

The discussions in 2002-03 ultimately led to the signing of the MOU in June 2003, that established a framework for the three organizations to work together to maximize the production of the existing power plant and to potentially further develop hydroelectric resources of the NWT. This was a significant step towards a consensus approach with respect to Project participation, development, and benefits.

The purpose of Dezé is to enable the partners to work together with a common mandate to pursue mutually beneficial interests, including environmental and cultural protection as well as economic benefits, in the development and operation of the Expansion Project. Dezé's Board of Directors has equal representation from the Akaitcho and Métis governments as well as the NTEC. Each of the three Dezé owner groups has a vested interest in the sustainability as it relates to the communities and residents they represent.

Dezé intends to continue with communication and information sessions, in consultation with the communities, at various stages throughout the EA and permitting processes and throughout the Project life cycle. Communications typically include a variety of methods for information exchange including physical models, graphics and visual aids.

The extent to which the owner groups communicate with communities and/or local governing bodies is outside of Dezé's scope; however, information obtained during Dezé's communications that is relevant to the owner groups would be passed on to those groups.

Key sections of this DAR that demonstrate the Dezé's efforts to engage stakeholder input into the process include:

- Chapter 2 – Regulatory Process.
- Chapter 3 – Developer.
- Chapter 4 – Community Engagement.
- Chapter 5 – Purpose and Rationale.
- Chapter 9 –Traditional Knowledge Section (9.6.8).

18.3.4 Assessment

Table 18.6 reviews the sustainability principles for assessment. Monitoring of the essential element indicators provides the basis for assessment of sustainable development. Repeated and regular measurement of the established indicators would determine the Project status in adhering to the principles of sustainability.

Table 18.6 — Sustainability Principles: Assessment

Bellagio			MVRMA	
Principles		**Description**	**Guiding Principles**	**Description**
ASSESSMENT	Ongoing assessment	Establishment of baseline data to determine starting point. Repeated, regular measurement of established parameters as instructed by regulatory bodies to assess progress matched with sustainability vision and objectives. Adjust as new insights are gained.	Monitoring, management and reporting	Monitoring, management and reporting systems incorporated essential elements of sustainability
	Institutional capacity	Clear assignment of responsibility for providing ongoing support for data collection, maintenance and documentation.		

Sustainability is a dynamic process that requires continual management, adjustment (of the Project and/or of the indicators) and reporting. The monitoring and reporting requirements established under the Water and Land Use licences would become, in part, a component of the assessment process. The VECs identified in the licences, an outcome of the EA and permitting processes, would reflect direct essential element indicators of the Project.

Insight gained from the ongoing assessment would allow for iterative, adaptive and responsive Project management, as required. The assessment would also be used to initiate monitoring or indicator changes to ensure the indicators are appropriate for the Project stage and dynamic human and natural environments.

Key sections of this DAR that are relevant to Dezé's assessment responsibilities include:

- Chapter 9 – Existing Environment.
- Chapters 12 through 15 – Monitoring Programs Sections.
- Chapter 20 – Table of Commitments.

18.4 PROJECT CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

As a result of the unique ownership of Dezé, the Project was planned and has been developed with a vision and perspective of sustainable development that embraces economic, social, environmental and cultural elements. The evaluation of the Project on the four MVRMA bases is discussed below. The evaluation uses the same classification and descriptors for the four bases as used for the assessment of the biophysical and socio-economic elements, and as presented in Chapter 10 – Methodology.

1. **The extent to which the Project makes a positive overall contribution towards environmental, social, cultural and economic elements of sustainability.**

As described in the Content section above, in consideration of the environmental, social, economic, and cultural essential elements, the Project makes significant positive contributions to maintaining natural resources. This is demonstrated through the considerable beneficial local effects, mitigation of negative effects to ensure they are less than significant, and continued mitigation investigations and designs toward any elements that were identified as potentially negative and significant. The Project also makes considerable positive contributions to maintaining natural resources, including air, water, and fossil fuel, in local to global spatial scopes, and multi-generational temporal scopes. Table 18.7 classifies descriptors of the overall extent of the Project's contribution toward essential elements of sustainability.

Table 18.7 — Evaluation of Content

Sustainability Evaluation		Direction	Magnitude	Geographic Extent	Duration	Reversibility	Frequency	Likelihood
BELLAGIO	**MVRMA**							
Content	The extent to which the Project makes a positive overall contribution towards environmental, social, cultural and economic elements of sustainability	Beneficial	High	Beyond Regional	Multi-genera-tional	Irreversible[1]	Continuous	Highly Likely

[1] Although many of the local components would be reversible if the Project were to revert to its current configuration, the beneficial global effects to sustainability of natural resources over multiple generations would not be reversible.

Based on these classifications, the Project makes a significant overall contribution towards environmental, social, cultural, and economic elements of sustainability.

2. How the planning and design take into account the desire to contribute to sustainable development.

As described in the Vision section above, the unique ownership groups that comprise Dezé promoted a vision for the Project that weaves the principles of sustainable development into the Project planning, design, construction operations, future direction and mitigation measures. Examples include Project thresholds set by Dezé for the design and operations, such as no new flooding of the Taltson River and reservoirs, and identifying transmission line alternatives to avoid areas of cultural or environmental sensitivity.

The owner groups' multi-generational perspective spans both local generations within their communities and beyond-regional generations as the Project contributes to reducing negative effects on global scales. Table 18.8 classifies descriptors of how the vision contributes to sustainable development.

Table 18.8 — Evaluation of Vision

Sustainability Evaluation		Direction	Magnitude	Geographic Extent	Duration	Reversibility	Frequency	Likelihood
BELLAGIO	**MVRMA**							
Vision	How the planning and design take into account the desire to contribute to sustainable development	Beneficial	High	Beyond-regional	Long-term	Reversible	Continuous	Highly likely

Based on the above classification, the Project planning and design demonstrates a significant desire and contribution to sustainable development.

3. How monitoring, management and reporting systems have incorporated indicators of sustainability.

The Assessment section above overviews the incorporation of monitoring, management and reporting of the essential elements and Project sustainability. Dezé's vision, and commitment by Dezé and the individual owner groups to the communities, residents and local governing bodies, results in continual assessment against the indicators as established through engagement and communications with those communities and stakeholders. Table 18.9 classifies descriptors of the incorporation of the indicators of sustainability in the Project's assessment process, including monitoring, management and reporting.

Table 18.9 — Evaluation of Assessment

Sustainability Evaluation		Direction	Magnitude	Geographic Extent	Duration	Reversibility	Frequency	Likelihood
BELLAGIO	**MVRMA**							
Assessment	How monitoring, management and reporting systems have incorporated indicators of sustainability	Beneficial	Mod-erate	Regional	Long-term	Reversible	Continuous	Highly likely

Based on the above classification, Dezé's and the Project's monitoring, management and reporting systems have incorporated indicators of sustainability at a significant level, throughout the lifecycle of the Project.

4. The views of stakeholders and participants in the environmental assessment about whether the development promotes or threatens the pursuit of sustainable development

As discussed in the Process section above, community and stakeholder communications and engagement have been ongoing since conception of the Project. One of the prime examples of the Project acting on the view of the stakeholder is the incorporation of the Dezé Energy Corporation and its equal representation of owner groups on the Board of Directors. Dezé would continue to engage and communicate with stakeholders throughout the planning and EA process, and post-EA into permitting and beyond, to continually seek stakeholder views and adjust indicators to accurately represent the dynamic social and biophysical environments.

The continual input and feedback from the involved communities would provide the foundation for a meaningful assessment and adjustment of the Project's approach to attain sustainable development and meet the needs of current and future generations.

Table 18.10 classifies descriptors of the Process of community and stakeholder communications and engagement, the Project's incorporation of those interests into the Project plans, and stakeholder views of the Project as a contribution to sustainable development.

Table 18.10 — Evaluation of Process

Sustainability Evaluation		Direction	Magnitude	Geographic Extent	Duration	Reversibility	Frequency	Likelihood
BELLAGIO	**MVRMA**							
Process	The views of stakeholders and participants in the environmental assessment about whether the development promotes or threatens the pursuit of sustainable development	Beneficial	Moderate	Regional	Long-term	Reversible	Continuous	Highly likely

The overall engagement and communications with stakeholders pre-, during-, and post-EA process, and not only gathering views, but inclusion of those views to the creation of a sustainable development, is a significant communication process.

18.5 CLOSING COMMENTS

Dezé's vision commits the Project to the objectives set forth by the MVRMA guiding principles: make a positive overall contribution towards the four elements; assimilate sustainability principles in planning and design; monitor, manage and report on indicators; and maintain the engagement and participation of stakeholders.

The Expansion Project, due to its owner groups that have directed sustainability principles be incorporated into the lifecycle of the Project, makes a significant contribution to sustainable development, from local to global spatial scopes over multi-generations.

ATTACHMENT
EXAMPLES OF DIRECT AND INDIRECT INDICATORS

ATTACHMENT — Examples of Direct and Indirect Indicators

Social Elements	Linkage	Possible Measurement Parameters
Employment	Direct	Number of jobs created
	Indirect	Number of indirect jobs created to support the Project
Education and training	Direct	Number of training programs initiated by or because of the Project Number of participants that successfully completed the training programs Education level distribution
Housing	Indirect	Number of houses purchased Vacancy/occupancy rate for rental units
Health	Indirect	Number of Safety programs offered to 1) the Project employees and 2) the communities
Community services	Indirect	Number of existing community service organizations that the Project can contribute in- kind resources or funding towards that serve 1) Aboriginal people and 2) the community Identification of community services that are needed within the South Slave region that the Project can contribute in-kind resources or funding towards Number of new community service organizations that the Project has contributed in-kind resources or funding towards that serve 1) Aboriginal people and 2) the community

Economic Elements	Linkage	Possible Measurement Parameters
Employment rates	Direct	Number of new jobs Number of employed and number of unemployed individuals Employment participation rates
Employment income	Direct	Income level distribution Taxation rates
	Indirect	Housing prices
Business opportunities	Direct	Number of resource development projects within the study area that expand their existing operations due to increased hydroelectric capacity Number of businesses engaged by project procurement policies Number of new resource development projects within the study area
	Indirect	Number and type of businesses within the study area Number of new businesses started within the study area Airport traffic
Traditional land use	Indirect	Number of people involved in traditional harvesting Changes in harvester travel patterns
Economic well-being	Indirect	Number of wage/income earning jobs Value and quantity of fur trapping activities

Cultural Element	Linkage	Possible Measurement Parameters
Cultural identity	Direct	Heritage and archaeological resources Traditional use activities Harvesting and use of land
	Indirect	Number of Aboriginal people speaking native languages Number of schools with Aboriginal curricula Number of Aboriginal cultural events Number of Aboriginal people accessing/consuming traditional foods Number of Aboriginal Elders invited to teach traditional ways in schools
Cultural well-being	Indirect	Number of people involved in traditional harvesting and the number of organized on-the-land events/activities
Cultural or spiritual sites	Indirect	Change in the use of place names Changes in cultural values such as beliefs, norms and rules
Governance	Direct	Shareholders' adherence to MOU and future agreements
	Indirect	Number of Aboriginal people eligible to vote Number of Aboriginal people who actually vote Number of programs teaching Aboriginal governance Number of Aboriginal students studying governance Number of Aboriginal people in leadership or governance roles

Environmental Elements	Linkage	Possible Measurement Parameters
Aquatic setting	Direct	Aquatic habitat components
Caribou	Direct	Behavioural components
Air quality	Direct	GHG emissions Litres of diesel displaced
Hydrology	Direct	Water levels and flows

[i] Under the GNWT Gas Tax Agreement, communities are required to complete an Integrated Community Sustainability Plan (ICSP) by March 2010. The Government of NWT Municipal and Community Affairs (MACA) is working to develop a template for the ICSP, which will include a governance plan (strategic plan), a capital investment plan, a community energy plan, and a community human resources plan. The objective of the ICSP is to support communities to become sustainable, considering balancing of the key sustainable elements (i.e. social, economic, culture and environment) to meet the needs of existing and future generations that considers the diverse and unique issues and opportunities in each community. Each community is expected by the GNWT to develop its own specific definitions as they engage in their own planning processes. Therefore each community can then gauge their progress with respect to maintaining a sustainability balance.